



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,749	12/28/2000	Kenichi Fukuoka	201384US3	5566

22850 7590 09/25/2002

OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC  
FOURTH FLOOR  
1755 JEFFERSON DAVIS HIGHWAY  
ARLINGTON, VA 22202

EXAMINER

GARRETT, DAWN L

ART UNIT	PAPER NUMBER
----------	--------------

1774

DATE MAILED: 09/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

TC-4

# Office Action Summary

Applicati n No.

09/749,749

Applicant(s)

FUKUOKA ET AL.

Examiner

Dawn Garrett

Art Unit

1774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Objections***

1. The disclosure is objected to because of the following informalities: The word "fluoranthene" is misspelled throughout the specification. Appropriate correction is required.
2. Claims 1-29 are objected to because of the following informalities: The word "fluoranthene" is misspelled in the claims. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 2-10, 15, and 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. In claims 6-10, it is unclear whether or not the "fluorescent dopant" is the same or different than the "fluorescent compound" of instant claim 1. A "fluorescent dopant" is a compound, so these terms overlap in meaning. Clarification and/or correction are required.
6. The terms "light emitting layer **A**" and "light emitting layer **B**" do not distinguish the claims over a mere "light emitting layer". Claims 4 and 5 are substantially the same claim. Also, claims 8 and 9 are similar. Clarification and correction with the regard to the claim language is required.

Art Unit: 1774

7. Claims 15 and 16 are confusing because it is not clear if the light emitting medium or the anode and cathode comprises the oxidizing agent and reducing agent respectively. Clarification of these claims is required.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

9. Claims 1-29 are rejected under 35 U.S.C. 102(a) as being anticipated by Sato et al. (JP 11-329734). Sato et al. discloses a white light emitting element comprising a hole transport layer, a light emitting layer, hole blocking layer, anode, and cathode. The light emitting layer comprises an aromatic amine compound per the “light emitting material emitting blue light” and a fluorochrome whose fluorescent wavelength is in a range of 550 to 650 nm per the instant claim 1 “fluorescent compound” and the wavelength requirement of instant claim 29 (see JPO English abstract). The fluorescent fluorochrome may include perylene pigments per the instant claim 1 requirement of “a fluorescent compound having at least one structure selected from a fluoranthene skeleton structure, a pentacene skeleton structure, and a perylene skeleton structure” (see JPO website English translation paragraph [0038] page 9 of 16). The dopant in the luminous layer may be partially doped in the luminous layer or added in a concentration distribution (see paragraph [0039] of translation page 9 or 16) per the instant light

Art Unit: 1774

emitting medium layer embodiments. Per instant claims 18-20 and 23-28, styryl compounds are taught as part of the organic medium of the EL device (see page 10 of 16, paragraph [0048]) and also anthryl derivatives are taught (see page 4 of 16, paragraph [0028]). Aromatic amines are discussed on page 3 of the translation. Per instant claims 11-14, the EL device comprises hole transporting and blocking material (see English abstract) and electron transporting material (see paragraph [0017]). Per instant claim 17, ultra-thin films such as LiF or lithium oxide are inserted in the interface between the cathode and the luminous layer (see page 12 of 16 of translation, paragraph [0058]). Sato et al. discloses all the elements of an organic EL device as presently claimed.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (703) 305-0788. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached at (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Art Unit: 1774

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2351.



D.G.

September 20, 2002

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

